

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

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REMARKS ON VOLES OF THE GENUS *LEMMISCUS*,  
WITH ONE DESCRIBED AS NEW.

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The American voles of the genus *Lemmyscus*,<sup>1</sup> until recently regarded as a subgenus under the Old World genus *Lagurus*, form a small group known to range in more or less isolated sections of the Transition Zone, from the eastern slopes of the Sierra Nevada in California east to the Rocky Mountains in northern Colorado and northward on the mountains and hills rising from semi-arid plains of the interior east of the Cascade Range to Calgary, Alberta. The altitudinal range is from about 2,000 feet on hills in western North Dakota to 10,500 feet in the White Mountains of eastern California, as recorded by Hall (Jour. Mamm., vol. 9, No. 3, p. 201, 1928). Knowledge of the group is very incomplete, as distribution is interrupted and collections, except in a few places, have not been extensive. The present remarks are based on the examination of 134 specimens in the U. S. National Museum, including the types of *Arvicola curtata* Cope, *Arvicola pauperrima* Cooper, and *Arvicola (Chilotus) pallidus* Merriam. General comparisons of adults reveal that these names represent populations differing mainly in the minor cranial details that commonly characterize geographic races or subspecies. Maturity, in the group, is reliably indicated by the full size of the cranium and the tendency to develop a slight median ridge on the frontals. Specimens representing a number of localities are of young individuals, and as only those of adults are very satisfactory for comparative purposes much

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<sup>1</sup> Raised by Davis (Recent Mammals of Idaho, 1939, p. 325) to full generic rank. I have not examined *Lagurus*, but the differential characters as set forth by Davis seem to be ample.

remains to be learned concerning the distribution and intergradation of races.

The animal now recognized as *Lemmiscus pauperrimus* is evidently very closely allied to *Lemmiscus curtatus*, the principal difference noted being the usually larger, more fully distended auditory bullae. Even this slight character is subject to considerable variation. *Lemmiscus pallidus* averages very slightly paler than *curtatus* and *pauperrimus*. The skull of *pallidus* is very similar in size to those of *curtatus* and *pauperrimus*, but the zygomata are more widely spreading, the auditory bullae smaller, and the molar tooth rows longer than in either. No topotypes of *Microtus (Lagurus) curtatus artemisiae* Anthony, from Ironside, Malheur County, Oregon, or of *Microtus (Lagurus) intermedius* Taylor, from the Pine Forest Mountains, Humboldt County, Nevada, have been examined by me, and their relationship to near geographic neighbors may be subject to revision. The three forms considered are, however, regarded as subspecies with type localities as follows:

<i>Lemmiscus curtatus curtatus</i> (Cope).....	Pigeon Spring, Mount Magruder, Nevada.
<i>Lemmiscus curtatus pauperrimus</i> (Cooper).....	Plains of the Columbia, near Snake River, Wash- ington.
<i>Lemmiscus curtatus pallidus</i> (Merriam).....	Fort Buford, Williams County, North Dakota.

A hitherto unrecognized subspecies may be known by the following description:

***Lemmiscus curtatus levidensis*, subsp. nov.**

ROCKY MOUNTAIN PYGMY VOLE.

*Type*.—From sandhills 5 miles east of Canadian River, at west base of Medicine Bow Range, east of Walden, North Park, Jackson County, Colorado (altitude about 8,000 feet). No. 148168, ♀ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by Merritt Cary, August 6, 1906. Original number 733.

*Distribution*.—Rocky Mountain region, from northwestern Colorado northwest through northwestern Utah, and southwestern Wyoming to eastern Idaho (Salmon River Mountains) and southwestern Montana.

*General characters*.—A small race of *Lemmiscus curtatus*; skull slender and flattened, with frontal region notably depressed. Closely resembling *Lemmiscus curtatus curtatus* of western Nevada, *Lemmiscus curtatus pauperrimus* of southwestern Washington, and *Lemmiscus curtatus pallidus* of northwestern North Dakota in color, but decidedly smaller; skull slender and flatter.

*Color*.—*Type* (summer pelage): Upper parts in general near "wood brown" (Ridgway, 1912), with a "cinnamon-buff" suffusion, darkened on top of head and back by a fine admixture of dusky-tipped hairs; under

parts dull whitish; ears edged with "cinnamon-buff"; feet white; tail brownish along a narrow median line above, white on sides and below. In some adults the "cinnamon-buff" suffusion is more pronounced. *Young*: Similar to adults, but darker in general tone.

*Skull*.—Similar to those of *curtatus*, *pauperrimus* and *pallidus*, but smaller, slenderer, more flattened, the brain case decidedly lower, and the frontal region more depressed or concave in upper outline than in any of them; auditory bullae small; dentition relatively heavy.

*Measurements*.—*Type*: Total length, 120 mm.; tail vertebrae, 20; hind foot, 17. An adult male and female from Elk Springs, 8 miles south of Lily, Moffat County, Colorado, respectively: 115, 122; 21, 19; 18, 18. *Skull* (type): Occipitonasal length, 23.1; condylobasal length, 23.4; basicranial depth (over auditory bullae), 7.8; zygomatic breadth, 13.7; interorbital constriction, 3.2; width across squamosals (at mastoids), 10.9; length of nasals, 5.9; upper molar tooth row, 5.6. An adult male topotype: Occipitonasal length, 22.9; condylobasal length, 23.3; basicranial depth, 7.8; zygomatic breadth, 14; interorbital constriction, 3.6; width across squamosals, 11.1; length of nasals, 6.4; upper molar tooth row, 5.7.

*Remarks*.—The specimens here assigned to this small race were formerly referred to *pauperrimus*, of which only young examples were available, and comparisons were therefore apt to be misleading. The best distinguishing character is the shallow depth of the cranium, compared with the neighboring geographic races.

*Specimens examined*.—Total number, 47, as follows:

Colorado: Canadian River (5 miles east), 4 (1 skull without skin); Elk Springs, 8 miles south of Lily (6,500 feet), 6; Fort Collins, 1; Toponas, Egeria Park, 8; Two Bar Springs, Moffat County, 12.<sup>2</sup>  
 Idaho: American Falls, 1; Salmon River Mountains, 6; Silver City (45 miles southeast), 1 (skin only).  
 Montana: Donovan, Beaverhead County, 2.  
 Utah: Uintah Mountains (10,000 feet), 2.  
 Wyoming: Fort Bridger (20 miles south), 4.

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<sup>2</sup> Col. Mus. Nat. Hist.